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EXAMINER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/696,532  
Filing Date: October 28, 2003  
Appellant(s): OKADA, NAOBUMI

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Douglas Holtz  
220 Fifth Avenue 16<sup>th</sup> Floor  
New York, NY 10001-7708  
For Appellant

**EXAMINER'S ANSWER**

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This is in response to the appeal brief filed 7/14/08 appealing from the Office action mailed 12/31/07.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

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6,639,657	BAER et al.	10-2003
4,842,782	PORTNEY et al.	6-1989

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baer et al. (USPN 6,639,657) in view of Portney et al. (USPN 4,842,782).

Baer et al. teaches laser capture microdissection. The apparatus has a laser with a path (320 & 310) that intersects with a dichroic mirror (340) then a lens (350), which may have a variable aperture and then an objective (360).

Baer et al. does not teach the use of pattern forming means and the energy of the laser beam and vaporization of material using a laser.

Portney et al. discloses a laser ablation system (vaporization of material), which uses a mask to shape lenses. The number and energy of pulses can control the depth of the cut. The laser beam is masked such that the laser energy may be varied along the workpiece (specimen).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a mask (pattern forming means) as taught by Portney et al. in the Baer et al. apparatus because it ensures that the exact desired area is processed.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use variable laser energy as taught by Portney et al. in the Baer et al. apparatus because it allows for specific machining of a workpiece or tailored cutting/dissection.

#### **(10) Response to Argument**

##### The Rejection under 35 USC 103 in view of Baer et al. and Portney et al.

Appellant argues that Baer et al. discloses a laser microdissection apparatus and Portney et al. relates to manufacturing ophthalmic lenses and hence there is no motivation to combine. In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Baer et al. is directed to a laser capture microdissection apparatus which is typically used for microdissection of tissue biopsies and cells. Portney et al. is directed to cutting of ophthalmic lenses for contacts, corneal implants, intraocular lenses and so forth. Both

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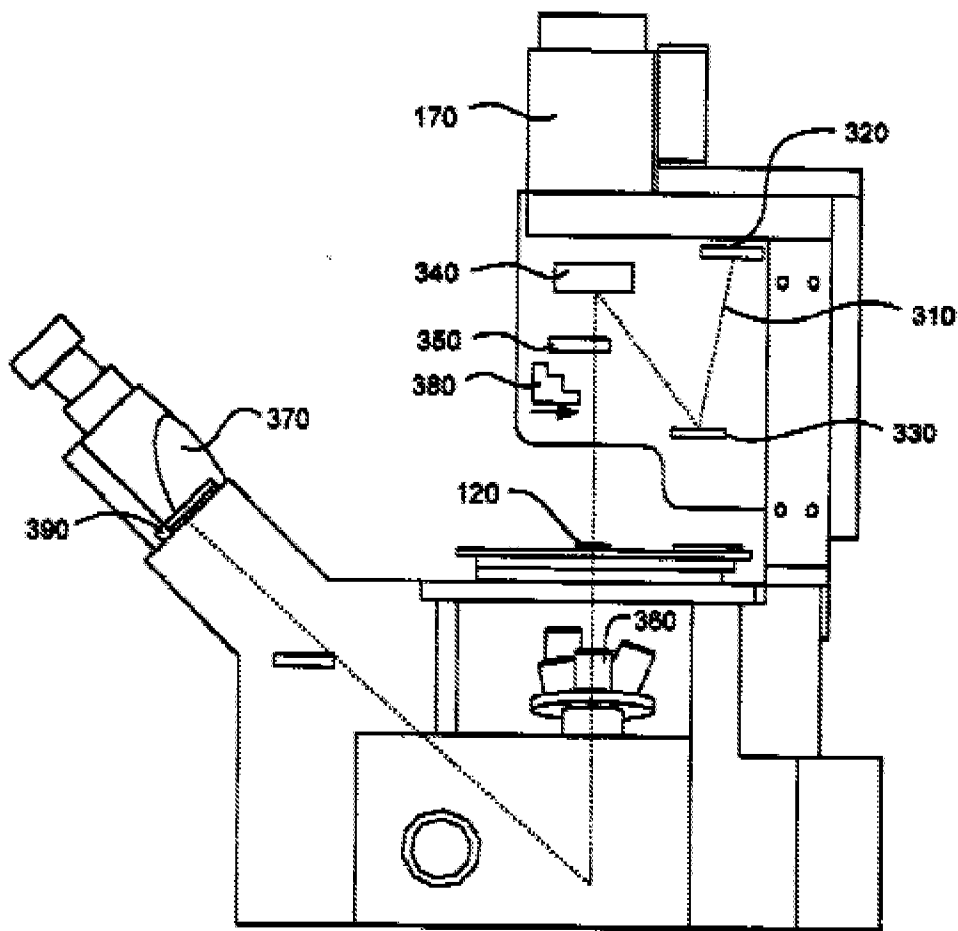
Baer et al. and Portney et al. are directed to the cutting of biological materials or in-vivo implants and hence one of ordinary skill in the art at the time of the invention would be motivated to use these devices (and thus references) together.

Re: Claims 1-3, 6, 10-11, 27-29, 32-33 & 36

Appellant argues that the examiner points out that the laser light passes through the objective lens but does not pass through the microcentrifuge cap 120. The examiner believes that the definition of an objective lens at this point would be helpful. An objective lens according to Webster's is a lens or system of lens that forms an image of an object. Baer et al. discloses an objective lens (360) which is below the microcentrifuge tube cap (120) (which is essentially a sample holder) for viewing. In addition, lens (350) is located between the laser (laser beam path 310) and the sample holder (120).

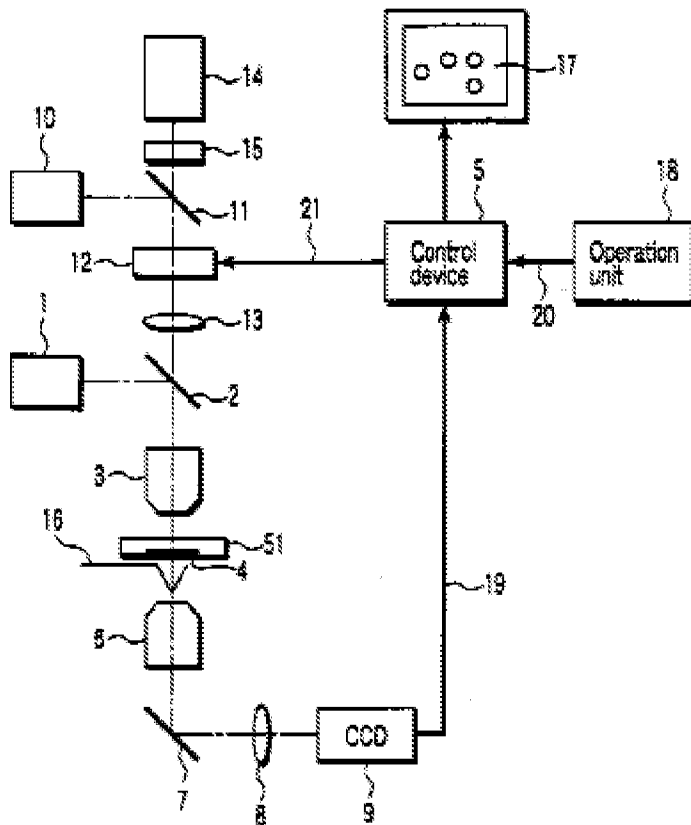
...The **laser beam path 310 is then focused by a lens 350**. The lens 350 can optionally be associated with structure for changing the beam diameter such as, for example, a variable aperture. **The laser beam path 310 then passes downward toward the microcentrifuge tube cap 120**. The laser beam path 310 then passes through an objective lens 360 and is then reflected. A cut-off filter 390 is installed in the ocular 370... (Baer et al. col. 6, lines 33-40)

Thus, Baer et al. teaches a lens (350) which acts as an objective lens in that it focuses light and casts an image onto the sample (sample holder, microcentrifuge tube cap). In addition Baer et al. teaches another objective lens (360). This is very much the same as appellant's apparatus set up.



**FIG. 3**

Figure 3: Baer et al. shows the laser beam path (310) which passes through lens (350) which is an objective lens functional equivalent, then images onto the sample (microcentrifuge tube cap 120) and then moves on to the other objective (360) to allow for operator observation.



Appellant's figure 1: microdissection apparatus.

Baer's lens (350), a functionally equivalent to an objective lens, is the same as appellant's objective lens (3). Both Baers' lens and Appellant's lens allow for passage of laser light which is then imaged onto the sample (Baer et al. 120 and Appellant 51). Following imaging onto the sample, laser light is passed onto another objective (Baer 360 and Appellant 6) which may then be viewed by an ocular/operator (370) or a "CCD" (9).



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Thus, Baer et al. essentially anticipates appellant's (objective lens and sample area) apparatus part differing only in the terminology of the lens. Baer et al. does teach an "objective lens", above the sample (albeit labeled a lens 350) which passes laser light, and then images on to the sample (120).

Appellant argues that Baer et al. and Portney et al. do not teach *an active optical element, on which a variable pattern that is set to correspond to a necessary area is formed*. (Examples of an active optical element as described in the specification (appellants) are a transmission type liquid crystal substrate 12 and a micromirror array 25). The examiner respectfully disagrees because Baer et al. does teach an active optical element as follows:

...The **lens 350** can optionally be associated with structure for changing the beam diameter such as, for example, **a variable aperture**.... (Baer et al. col. 6, lines 34-36)

It is obvious to one of ordinary skill in the art that the Baer et al, lens (350) is an optical element. If the diameter of the beam is altered by a variable aperture, it follows that the optical element is active, in that it is able to exert a change. Thus the lens (350) with a variable aperture of Baer et al. meets instant claim limitation of an active optical element.

With respect to the claim limitation of *a variable pattern that is set to correspond to a necessary area is formed*, the examiner has relied on Portney et al. Portney et al. uses masks in combination with a laser to cut, shape, surface model and bevel

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ophthalmic lenses (biological implants). Different masks are used for different operations on the lens material, as follows:

...the workpiece is first cut to shape by shining a laser beam through a mask outlining the form of the cut required to shape (in the case of an ophthalmic lens) the optic and haptic. Considerable precision can be obtained in this step by expanding the laser beam in front of the mask and then reducing it beyond the mask to provide fine detail from a relatively large mask. The depth of the cut can be controlled by the number and energy of the pulses.... an example being mask #22... (Portney et al. col. 1, lines 43-51)

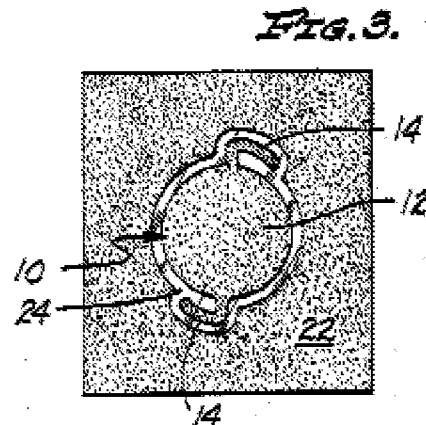


Figure 3: Portney et al.

...surface modeling of the lens is next achieved by masking a laser beam in such a way that its energy distribution varies across the surface of the workpiece so as to ablate it to differing degrees at different points of the surface. This can be achieved by using a mask of varying opacity or a semi-transparent mirror with a coating of varying thickness at different points on the surface... an example being mask #32... (Portney et al. col. 1, lines 52-59)

...the mask 32 has different degrees of transparency at different points on the mask 32. For example, the mask 32 may have a coating of variable transmission characteristics, or it may be a neutral density filter (such as a polarizing or haze filter) with non-uniform transmission characteristic. In any event, the mask 32 transmits a large amount of beam energy in the areas 34 corresponding to desired depressions in the workpiece 10, and a small amount in the areas 36 corresponding to desired

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protrusions in the workpiece 10...By appropriately controlling the transmission characteristics of the mask 32, it is possible to model or shape the surface 38 of the workpiece 10 in any desired manner without complex machining... (Portney et al. col. 3, lines 15-29)

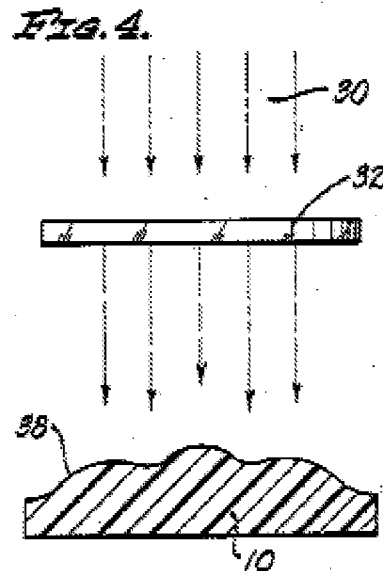


Figure 4: Portney et al.

...a laser beam is masked and focused generally into the form of a hollow cone whose tip is the focal point of the beam. By exposing the workpiece to the beam on one side of the focal point and then on the other, two bevel cuts are made along the perimeter of the upper and lower surfaces, respectively, of the workpiece... an example being mask #48... (Portney et al. col. 1, lines 61-67)

Portney et al. teaches masks that cut, masks that shape the workpiece based on opacity or transmission characteristics and masks that bevel the workpiece. It is the position of the examiner that cutting, shaping and beveling as taught by Portney et al. essentially amount to patterning of the workpiece. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the active optical

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element (lens 350 with associated structure for varying the aperture) of Baer et al. with the *a variable pattern that is set to correspond to a necessary area is formed* (a mask 22 to cut a required shape, mask 32 having different degrees of transparency at different points on the mask to shape a workpiece and mask 48 to bevel the workpiece) of Portney et al. in order to meet instant claim limitations.

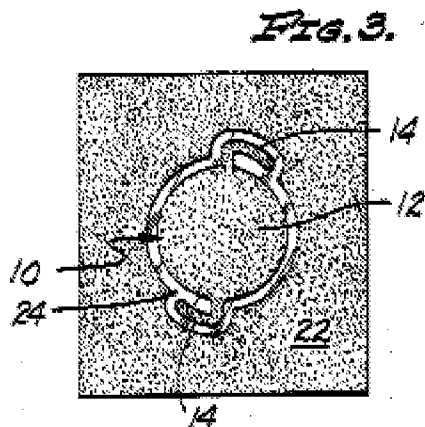
Appellant argues that Portney et al. contains no disclosure to suggest that mask 32 is an active optical element or that a variable pattern can be formed on the mask 32. The examiner respectfully notes that Baer et al. teaches an active optical element (lens 350 with associated structure for varying the aperture) and Portney et al. discloses a variable pattern set to correspond to a necessary area (masks 22, 32 and/or 48). The masks 22, 32 and/or 48 have differing patterns and by their nature produce differing results or patterns on the workpiece ("necessary area").

Appellant argues that Portney et al. clearly does not suggest that the pattern formed on the mask 32 can be varied. The examiner respectfully notes that instant claims state: "*an active optical element on which a variable pattern set to correspond to a necessary area*". A variable pattern does not mean that the pattern has be constantly changing but rather than it may be changed. This limitation is met by Portney et al. when different masks are used, resulting in different patterns being formed on the workpiece.

Appellant argues that Portney et al. does not teach an active mask. The examiner respectfully notes that the claim limitation is drawn to an active optical element on which a variable pattern set to correspond to a necessary area is formed (e.g. a mask). Furthermore, Baer et al. discloses an active optical element and Portney et al. discloses a variable pattern set to a necessary area using a mask.

Appellant argues Portney et al. does not disclose that the mask 32 excludes any area of the workpiece 10 from being irradiated with light. By contrast, according to independent claim 1, the laser light is irradiated through (transmitted through or reflected by) the active optical element such that “a part of the sample excluding the necessary area is irradiated with the laser light”. It is respectfully submitted that Portney et al. does not disclose or suggest that the mask 32 has such a structure. The examiner respectfully disagrees with Appellant because Portney et al. discloses:

...the workpiece is first cut to shape by shining a laser beam through a mask outlining the form of the cut required to shape (in the case of an ophthalmic lens) the optic and haptic.... The depth of the cut can be controlled by the number and energy of the pulses. (Portney et al. col. 1, lines 43-45, 50-51)



workpiece (10), mask (22) and outline (24 pattern)

...A **mask 22** best shown in FIG. 3 is formed integrally with the beam expander 20 or placed into the path of the expanded beam 18 **to allow only a narrow strip of light in the shape of the outline 24 of the workpiece 10 to pass through the mask 22.**  
(Portney et al. col. 2, lines 63-68)

Thus, Portney et al. discloses that the part of the workpiece which is exposed to the laser beam (irradiation source) is cut and obvious the part of the workpiece which is not subjected to the laser beam (not subjected to the irradiation source) will not be cut. Consequently, Portney et al. meets instant claims.

Appellant argues that none of the masks (22, 32 & 48) of Portney et al. is an active optical element as recited in the claim. In addition, it is respectfully submitted that Portney et al. does not disclose or suggest that any of masks 22, 32 and 48 has a variable pattern formed thereon, or that such a variable pattern is set to correspond to a necessary area, as recited in claim 1. The examiner respectfully disagrees because Baer et al. teaches an active optical element (lens 350 with associated

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structure for varying the aperture). Additionally, Portney et al. discloses masks that have patterns that are used to form different patterns on a workpiece by shaping, cutting and so forth. The masks are not active optical elements but rather devices for forming variable patterns onto a workpiece.

Appellant argues that moving a mask of Portney et al. does not change the pattern on the mask itself, but rather merely changes the location of the mask. It is the position of the examiner that the claim limitation, “an active optical element on which a variable pattern set to correspond to a necessary area is formed” means a pattern (variable) is formed on the necessary area (i.e. the workpiece). Thus the variable pattern is integral with the workpiece. The masks (32, 22 & 48) of Portney et al. may be used to change the pattern on the workpiece and if a singular mask is moved it will also form a differing pattern on the workpiece. Thus, the masks of Portney et al. meet the claim limitation of “a variable pattern set to correspond to a necessary area is formed”, while Baer et al. meets the active optical element with lens 350 having a variable aperture.

In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does

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not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Appellant argues that Baer et al. irradiates the desired area with laser light, whereas Portney et al. does not irradiate the desired area with laser light. The examiner respectfully disagrees because both systems cut out/cut around (irradiate) the area/sample/workpiece of interest.

Appellant argues that the structure of Baer et al. in view of Portney et al. would change the principle of operation of the structure of Baer et al. and therefore is not obvious to combine. The examiner respectfully disagrees because Baer et al. teaches an active optical element (lens 350 with a varying aperture) and Portney et al. teaches a variable pattern is set to correspond to a necessary area (mask(s)) which maybe placed in the vicinity of the active optical element generating variable patterns on the workpiece. Furthermore, the manner in which an apparatus operates is not germane to the issue of patentability of the apparatus itself. Ex parte Wikdahl 10 USPQ 2d 1546, 1548 (BPAI 1989); Ex parte McCullough 7 USPQ 2d 1889, 1891 (BPAI 1988); In re Finsterwalder 168 USPQ 530 (CCPA 1971); In re Casey 152 USPQ 235, 238 (CCPA 1967). Additionally, the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have. In re Newell 13 USPQ 2d 1248, 1250 (Fed. Cir. 1989); Fromson v. Advance Offset Plate 225 USPQ



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26, 31 (Fed. Cir. 1985); *In re Gyurik* 201 USPQ 552, 557 (CCPA 1979). It is the position of the examiner that use of a pattern for forming varying patterns on a workpiece in an apparatus which is directed to cutting samples would be intuitive. Consequently, one skilled in the art would be strongly motivated to use of a mask (Portney et al.) to generate variable patterns on a workpiece in a laser apparatus which cuts samples (Baer et al.).

Appellant argues that Portney et al. does not disclose, suggest an active optical element. The examiner respectfully notes that the active optical element (lens 350 with a varying aperture) is taught by Baer et al.

Appellant argues that the examiner's suggested combination of an ophthalmic lens manufacturing method with a laser microdissection apparatus of Baer et al. is merely based on hindsight reasoning. In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Appellant argues that Baer et al. discloses a laser microdissection apparatus and Portney et al. relates to manufacturing ophthalmic lenses and hence there is no motivation to combine. In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Baer et al. is directed to a laser capture microdissection apparatus which is typically used for microdissection of tissue biopsies and cells. Portney et al. is directed to cutting of ophthalmic lenses for contacts, corneal implants, intraocular lenses and so forth. Both Baer et al. and Portney et al. are directed to the cutting of biological materials or in-vivo implants and hence one of ordinary skill in the art at the time of the invention would be motivated to use these devices (and thus references) together.

Re: Claim 4

Appellant argues that Portney et al. fails to suggest an apparatus that includes an input unit to input information for setting the pattern formed on the active optical element as recited in claim 4. The examiner respectfully disagrees because the active optical element is taught by Baer et al. In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references

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individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Furthermore, Baer et al. has a joystick subsystem which the operator uses (input unit). Portney et al. teaches the use of mask(s) which yield varying patterns.

Re: Claim 5

Appellant argues that Portney et al. clearly fails to suggest an apparatus that includes a control unit to set the pattern formed on the active optical element based on the observation image acquired by the observation optical system as recited claim 5. The examiner respectfully disagrees because Baer et al. discloses an active optical element and Portney et al. discloses a variable pattern set to correspond to a necessary area. In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In addition, Baer et al. teaches a joystick system (control unit) and an image acquisition system (230) (observation optical system). Baer et al. discloses:

...moving said sample and said translation stage with a manual joystick subsystem that is connected to said translation stage; wherein moving said sample and said translation stage with said manual joystick subsystem includes reducing a scalar movement defined by an operator; adjusting a leverage ratio to control sample movement as a function of operator hand movement; and transferring a portion of said sample. (Baer et al. claim 4)

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The provision of mechanical or automated means to replace manual activity was held obvious. In re Venner 120 USPQ 192.

Re: Claims 7-9

Appellant argues that Baer et al. and Portney et al. do not teach a rely lens with an insertion/removal mechanism. The examiner respectfully disagrees because Baer et al. discloses a prism (380) which:

...**inserting** a stepped glass prism 380 into the beam so the beam strikes one step tread will change the optical path length and alter the spot size.

...means of indents on a **movable lens mounting** and/or by means of optical glass steps. (Baer et al. col. 7, lines 18-24)

It is well known by one of ordinary skill in the art at the time of the invention that changing the spot will invariably change the energy density, which is the same effect as using a rely lens.

Re: Claim 30

Appellant argues that Baer et al. clearly fails to disclose the structure of claim 30 whereby the objective lens of the laser light irradiation system is also part of the observation system. The examiner respectfully notes that Baer et al. in fact discloses two objective lens, one (360) below the sample and one above; (350) a lens which is a functional equivalent objective lens. Baer et al. teaches a lens (350) which acts as an objective lens in that it focuses light and casts an image onto the sample (sample

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holder, microcentrifuge tube cap). The “objective” lens (350) of Baer et al. is not directly connected to the observation system, however: Making elements integral was held to have been obvious. In re Lindberg 116 USPQ 23 and Rearrangement of parts was held to have been obvious. In re Japikse 86 USPQ 70.

Re: Claim 31

Appellant argues that Baer et al. does not teach an observation optical system which acquires an observation image of the sample and that the objective lens of the laser light irradiation optical system is also part of the observation optical system. The examiner respectfully disagrees because Baer et al. teaches a joystick system (control unit) and an image acquisition system (230) (observation optical system). Baer et al. discloses:

...moving said sample and said translation stage with a manual joystick subsystem that is connected to said translation stage; wherein moving said sample and said translation stage with said manual joystick subsystem includes reducing a scalar movement defined by an operator; adjusting a leverage ratio to control sample movement as a function of operator hand movement; and transferring a portion of said sample. (Baer et al. claim 4)

The provision of mechanical or automated means to replace manual activity was held obvious. In re Venner 120 USPQ 192.

Baer et al. discloses two objective lens, one (360) below the sample and one above; (350) a lens which is a functional equivalent objective lens. Baer et al. teaches a lens (350) which acts as an objective lens in that it focuses light and casts an image onto the

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sample (sample holder, microcentrifuge tube cap). The “objective” lens (350) of Baer et al. is not directly connected to the observation system, however: Making elements integral was held to have been obvious. In re Lindberg 116 USPQ 23 and Rearrangement of parts was held to have been obvious. In re Japikse 86 USPQ 70.

Re: Claim 34

Appellant argues that the prior art does not disclose a liquid crystal substrate (active optical element). The examiner respectfully notes that Baer et al. discloses an active optical element (lens 350 with a varying aperture). Substitution of known equivalent structures is known. In re Ruff 118 USPQ 343 (CCPA 1958).

Re: Claim 35

Appellant argues that the prior art does not disclose micro mirror array (active optical element). The examiner respectfully notes that Baer et al. discloses an active optical element (lens 350 with a varying aperture). Substitution of known equivalent structures is known. In re Ruff 118 USPQ 343 (CCPA 1058).

Re: Claims 12-14, 17 & 21-22

Appellant argues that a pattern forming means is not taught by Baer et al. or Portney et al. In addition the masks of Portney et al. clearly are not equivalent to the structure (that is, active optical element). The examiner respectfully disagrees because Baer et al. teaches an active optical element while Portney et al. discloses a variable

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pattern set to correspond to a necessary area (mask(s) which generate varying patterns onto a workpiece).

Appellant argues that the objective lens of Baer et al. cannot logically be interpreted as corresponding to the objective lens recited in claim 12. The examiner respectfully notes that Baer et al. discloses two objective lens, one (360) below the sample and one above; (350) a lens which is a functional equivalent objective lens. Baer et al. teaches a lens (350) which acts as an objective lens in that it focuses light, casting an image onto the sample (sample holder, microcentrifuge tube cap). The "objective" lens (350) of Baer et al. is not directly connected to the observation system, however: Making elements integral was held to have been obvious. In re Lindberg 116 USPQ 23 and Rearrangement of parts was held to have been obvious. In re Japikse 86 USPQ 70.

Appellant argues that Baer et al. and Portney are not properly combinable. In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Baer et al. is directed to a

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laser capture microdissection apparatus which is typically used for microdissection of tissue biopsies and cells. Portney et al. is directed to cutting of ophthalmic lenses for contacts, corneal implants, intraocular lenses and so forth. Both Baer et al. and Portney et al. are directed to the cutting of biological materials or in-vivo implants and hence one of ordinary skill in the art at the time of the invention would be motivated to use these devices (and thus references) together.

Appellant argues that combination of Baer et al. and Portney et al. is merely based on hindsight. In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Re: Claim 15

Appellant argues that a pattern image projection system and an inputting means for inputting information for setting the pattern formed by the pattern forming means is not taught by Baer et al. or Portney et al. The examiner respectfully disagrees because Portney et al. discloses the generation of patterns. In addition, Baer et al. teaches a



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joystick system (control unit) and an image acquisition system (230) (observation optical system). Baer et al. discloses:

...moving said sample and said translation stage with a manual joystick subsystem that is connected to said translation stage; wherein moving said sample and said translation stage with said manual joystick subsystem includes reducing a scalar movement defined by an operator; adjusting a leverage ratio to control sample movement as a function of operator hand movement; and transferring a portion of said sample. (Baer et al. claim 4)

The provision of mechanical or automated means to replace manual activity was held obvious. In re Venner 120 USPQ 192.

Re: Claim 16

Appellant argues that a controller is not taught by Baer et al. or Portney et al. The examiner respectfully disagrees because Baer et al. teaches a joystick system (control unit) and

...moving said sample and said translation stage with a manual joystick subsystem that is connected to said translation stage; wherein moving said sample and said translation stage with said manual joystick subsystem includes reducing a scalar movement defined by an operator; adjusting a leverage ratio to control sample movement as a function of operator hand movement; and transferring a portion of said sample. (Baer et al. claim 4)

The provision of mechanical or automated means to replace manual activity was held obvious. In re Venner 120 USPQ 192.

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Re: Claims 18-20

Appellant argues that a relay lens inserted in the optical path is not taught by Baer et al. or Portney et al. The examiner respectfully disagrees because Baer et al. discloses prism (380) which:

...**inserting** a stepped glass prism 380 into the beam so the beam strikes one step tread will change the optical path length and alter the spot size.

...means of indents on a **movable lens mounting** and/or by means of optical glass steps. (Baer et al. col. 7, lines 18-24)

It is well known by one of ordinary skill in the art at the time of the invention that changing the spot will invariably change the energy density, which is the same effect as using a relay lens.

Re: Claims 23 & 24

Appellant argues that Portney et al. does not disclose or suggest an active optical element. The examiner respectfully notes that the active optical element (lens 350 with a varying aperture) is taught by Baer et al.

Appellant argues that Portney et al. does not teach a variable pattern on an active optical element. Baer et al. teaches the active optical element. Furthermore, Portney teaches a variable pattern (i.e. by the use of masks) and the pattern is generated onto the sample.

Art Unit: 3742

Appellant argues that the objective lens of Baer et al. cannot logically be interpreted as corresponding to the objective lens recited in claim 12. The examiner respectfully notes that Baer et al. discloses two objective lens, one (360) below the sample and one above; (350) a lens which is a functional equivalent objective lens. Baer et al. teaches a lens (350) which acts as an objective lens in that it focuses light and casts an image onto the sample (sample holder, microcentrifuge tube cap). The "objective" lens (350) of Baer et al. is not directly connected to the observation system, however: Making elements integral was held to have been obvious. In re Lindberg 116 USPQ 23 and Rearrangement of parts was held to have been obvious. In re Japikse 86 USPQ 70.

Appellant argues that Baer et al. and Portney are not properly combinable. In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Baer et al. is directed to a laser capture microdissection apparatus which is typically used for microdissection of tissue biopsies and cells. Portney et al. is directed to cutting of ophthalmic lenses for contacts, corneal implants, intraocular lenses and so forth. Both Baer et al. and Portney

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et al. are directed to the cutting of biological materials or in-vivo implants and hence one of ordinary skill in the art at the time of the invention would be motivated to use these devices (and thus references) together.

Appellant argues that combination of Baer et al. and Portney et al. is merely based on hindsight. In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Re: Claim 25

Appellant argues that setting a pattern formed on the active optical element based on the obtained observation image is not taught by Baer et al. or Portney et al. The examiner respectfully disagrees because Baer et al. discloses an active optical element and Portney et al. discloses pattern formation. Baer et al. discloses an observational image system.

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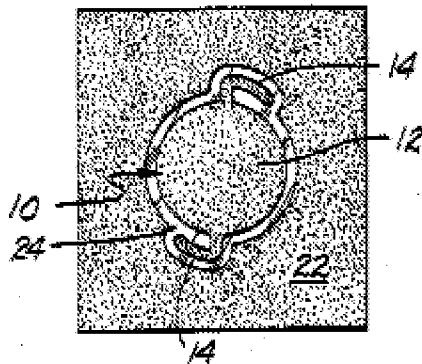
Re: Claim 26

Appellant argues that a converging beam of irradiated laser light onto a beam spot on the sample and relatively moving the beam spot of the converged beam of laser light with respect to the sample completely around an area to be collected including the necessary area is not taught by Baer et al. or Portney et al.

The examiner respectfully disagrees with Appellant because Portney et al. discloses:

...the workpiece is first cut to shape by shining a laser beam through a mask outlining the form of the cut required to shape (in the case of an ophthalmic lens) the optic and haptic.... The depth of the cut can be controlled by the number and energy of the pulses. (Portney et al. col. 1, lines 43-45, 50-51)

**Fig. 3.**



workpiece (10), mask (22) and outline (24 pattern)

...A mask 22 best shown in FIG. 3 is formed integrally with the beam expander 20 or placed into the path of the expanded beam 18 to allow only a narrow strip of light in the shape of the outline 24 of the workpiece 10 to pass through the mask 22. (Portney et al. col. 2, lines 63-68)

Thus, Portney et al. discloses that the part of the workpiece which is exposed to the laser beam (irradiation source) is cut and obvious the part of the workpiece which is not

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subjected to the laser beam (not subjected to the irradiation source) will not be cut.

Consequently, Portney et al. meets instant claim.

Portney et al. also discloses:

...the workpiece is first cut to shape by shining a laser beam through a mask outlining the form of the cut required to shape (in the case of an ophthalmic lens) the optic and haptic. Considerable precision can be obtained in this step by expanding the laser beam in front of the mask and then reducing it beyond the mask to provide fine detail from a relatively large mask. The depth of the cut can be controlled by the number and energy of the pulses.... an example being mask #22... (col. 1, lines 43-51)

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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